

REMARKS

Claims 18-43 are pending in the application. With entry of the amendment, claims 18 and 23 are amended.

Claim rejections under 35 USC 101

Claims 18-28 were rejected under 35 USC 101 as being directed to non-statutory subject matter. In particular, the Examiner indicated the view that the claims are neither positively tied to a particular machine nor transform underlying subject matter (so-called “machine-or-transformation test”), citing In re Bilski, 88 USPQ2d 1385. Applicants disagree. However, to expedite prosecution of the application, Applicants have amended claim 18 to recite:

A method of providing mobile or nomadic broadband services,
comprising:

providing access to a fixed broadband network to roaming mobile terminals via a wireless Local Area Network (LAN), said wireless LAN being connected to a broadband access line of the fixed broadband network, the broadband access line having a first capacity subscribed for by a fixed subscriber, the broadband access line further having a second capacity not subscribed for; and

allocating, using a resource management system, at least a portion of the second capacity to the roaming mobile terminals.

In the Response to Arguments section of the Office Action, the Examiner indicated that the preamble of claim 18 was not considered to have any weight. Accordingly, amended claim 18 now positively recites a “providing access” feature and an “allocating” feature.

Amended claim 18 recites, in part: “providing access to a fixed broadband network to roaming mobile terminals via a wireless Local Area Network (LAN).” Access is provided to a fixed broadband network via a wireless LAN, which is a particular machine, under the reasoning of In re Bilski.

Amended claim 18 further recites, in part: “allocating, using a resource management system, at least a portion of the second capacity.” A particular machine, namely, a resource management system, is recited for allocating capacity. The Specification (page 15, lines 5-20)

describes a resource management system as a module that performs bandwidth functions including allocation. Thus, claim 18, as amended, is patentable subject matter.

Because claims 19-28 depend from independent claim 18, Applicants respectfully submit that these dependent claims are patentable subject matter for at least the same reasons presented above.

Claim rejections under 35 USC 103

Claims 18-22, 27-30, 35, 36 and 41-43 were rejected under 35 USC 103(a) as being unpatentable over Chow et al. (US7010002) (hereinafter Chow) in view of Mo et al. (US20030072264) (hereinafter Mo). The rejection is respectfully traversed.

Chow discloses a broadband networking system for home, Small Office Home Office (SOHO) and business, including service and equipment elements. The system integrates a wireless access system/service in the residence, SOHO, business or public environment through the use of a local broadband network to the service provider's broadband transport network and to a service provider's broadband packet network that facilitates end-to-end packet services.

Chow describes how services that require knowledge of a user's whereabouts can be able to reach the user when the user is roaming in wireless networks other than their own. In summary, Chow discloses a system in which a client notifies a network service platform (NSP) before going offline at home. When the client later connects to an access point at a friend's house, the client registers with the NSP which associates the client with the new location. Such methods of connection have nothing to do with the present invention.

Chow discloses that a client may connect to the Internet over various wireless access points, provided that the access point allows the client to connect ("the visited AP[...] verifies that the laptop is valid for the visiting home network," col. 16, lines 2-3). Such an unsurprising result is similar to that which enables users to connect their laptops in cafeterias that provide wireless access.

Claim 18, as amended, recites a "broadband access line having a first capacity subscribed for by a fixed subscriber," "a second capacity not subscribed for," and "allocating, using a resource management system, at least a portion of the second capacity to roaming terminals." According to the Office Action, Chow discloses a "broadband transport link as a first capacity subscribed for by a fixed subscriber" but acknowledges that Chow does not teach "access line

having a second capacity not subscribed for, the method comprising allocating at least a portion of the second capacity to the nodes [sic].”

However, Applicants note that Chow does not, in fact, teach a first capacity subscribed for by a fixed subscriber. Chow mentions the word “capacity” only once (pointing out that wireless communication often has limited radio capacity in densely populated areas) and the word “bandwidth” only once (in the background section where it refers to the bandwidth limits of POTS). There is no allocation of capacity disclosed in Chow whatsoever. Indeed, from a bandwidth point of view, the roaming wireless laptops and non-roaming devices are treated the same in Chow. Thus, there is no way of differentiating between bandwidth allocation to the two types of devices in Chow because 1) the NSP has no way of controlling allocation of bandwidth at all and 2) roaming and non-roaming devices are treated the same by all other network components. (See, e.g., Chow at col. 15, line 55 to col. 16, line 26).

Mo describes how the capacity of a communication medium can be divided among several channels. In the system disclosed in Mo, the several channels are associated with different qualities of service (QoS). For example, the reserved bandwidth can be allocated to a reserved channel of one priority class (“[0017]... For example, a reserved channel class may be defined and include a guaranteed bandwidth that is available on medium 200 at all times.... [0018] Medium 200 includes a portion 200A having a reservation bandwidth that is reserved and thus unavailable for transmissions external to reserved channel 210”), while the remaining bandwidth can be allocated to other channels as needed (“[0018]...The remaining, unreserved portion 200B may be used for allocating other channels....[0019] A best effort channel 220 may be allocated upon a request identified as a best effort request.”) In other words, Mo describes how users may require different QoS for different uses such as streaming audio or video on the one hand and email or Internet content delivery on the other hand (see [0002] and [0003]). Mo distinguishes between services satisfying different customer needs, not different customers with different access rights.

In particular, Mo relates to allocating a link on an optical cable with a plurality of links. First, the utilization of a first allocated link is monitored. Then an unused bandwidth reserved by the first allocated link is determined. An allocation of a second link is requested, and the allocated bandwidth of the first allocated link is reduced. Finally, the second link is allocated.

There is no teaching of allocating this second link to roaming mobile terminals, or any particular type of terminal or use at all. As mentioned above, Mo allocates capacity among services with different QoS. Consequently, Mo fails to teach or suggest the features not taught by Chow.

The present invention addresses the question of how to provide broadband capacity to roaming mobile terminals without the use of dedicated lines and base stations. Using Chow to solve this problem would entail opening up home access points of home users as if any roaming mobile terminal were a friend. Adding the teachings of Mo would enable prioritization of capacity assigned to different types of services accessed/used by home user and roaming users alike. However, Chow and Mo alone or combined do not disclose how network capacity can be assigned respectively to a fixed subscriber and roaming terminals as required by amended claim 18. Accordingly, claim 18 is believed to be patentable over the combination of Chow and Mo.

Remaining independent claims 29 and 35 recite features corresponding to independent claim 18, and should be allowable for at least the same reasons stated for claim 18. Dependent claims 19-22, 27, 28, 30, 36 and 41-43 should be allowable at least by virtue of their dependence on corresponding independent claims 18, 29 and 35.

Reconsideration of the rejection is respectfully requested.

Claims 23-26, 31-34 and 37-40 were rejected under 35 USC 103(a) as being unpatentable over Chow in view of Mo and further in view of Hagen (US20020075844). The rejection is respectfully traversed.

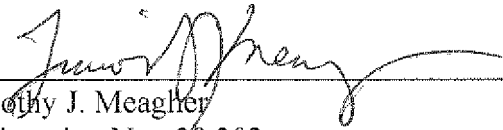
Claims 23-26, 31-34 and 37-40 depend from respective base claims 18, 29 and 35, and are patentable for at least the same reasons noted above with respect to base claims 18, 29 and 35. Reconsideration of the rejection is respectfully requested.

CONCLUSION

In view of the above amendments and remarks, it is believed that all claims are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned.

Respectfully submitted,

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